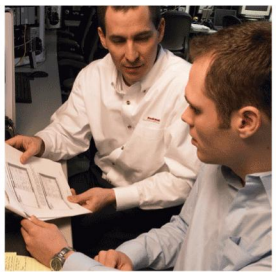
Automation Services & Training



NHP

Level 1 & 2: RSLogix 5000 ControlLogix Fundamentals and Troubleshooting

Course Code: CCP299

Duration: 4 Days

Course Purpose:

Upon completion of this course, you will be able to troubleshoot a previously operational ControlLogix system and restore normal operation.

You will have the opportunity to develop and practice these skills by:

- Learning basic concepts and terminology used with:
  - ControlLogix system hardware
  - RSLogix 5000 software
- Practicing a systematic strategy for diagnosing and troubleshooting problems:
  - Configuration issues
  - Electrical noise
  - Faulty/malfunctioning field devices
  - Controller, I/O or other hardware issues
- Performing hands-on exercises

All Logix5000 systems use the same control engine; therefore, tasks are similar. You will see applicable references for other systems.

Who Should Attend:

This course is intended for individuals who need to maintain and troubleshoot a ControlLogix system – but have no current working experience with ControlLogix systems.

Topic Outline:

- Optional: Understanding Control Systems
- Locating ControlLogix Components
- Operating RSLogix 5000 Software
- Optional: Selecting Industrial Networks
- Connecting a Computer to a Communications Network
- Downloading and Going Online
- Updating Logix5000 Firmware
- Interpreting RSLogix 5000 Project Organisation and Execution

For further information contact your local NHP Representative or visit nhp.com.au

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Topic outline (continued):

- Locating and Editing Tag Values
- Determining Local I/O Tags
- Drafting Basic Ladder Logic
- Selecting Ladder Logic Instructions
- Editing Ladder Logic Online
- Optional: Modifying Timer and Counter Instructions
- Interpreting Arrays and Tags of User-Defined Data Types
- Documenting /Printing Components
- Searching for Project Components
- Integrated Practice - Interpreting a Basic Project
- Applying Preventative Maintenance and Troubleshooting Strategies
- Troubleshooting Controller Problems
- Interpreting GSV/SSV Instructions
- Forcing I/O and Toggling Bits
- Troubleshooting Digital I/O Problems
- Troubleshooting Analogue I/O Problems
- Troubleshooting Remote I/O
- Troubleshooting Power Supplies
- Troubleshooting Noise Problems
- Analysing and Troubleshooting a System Using a Trend Chart
- Managing Project Files
- Integrated Practice-Troubleshooting Basic Projects

Prerequisites:

To successfully complete this course, the following prerequisites are required:

- Completion of Level 1: RSLogix 5000 ControlLogix Systems Fundamentals (Course No. CCP146)
  AND
- Knowledge of basic ladder logic instructions (bit, timer, counter, etc.) through a course (Course No. CCP151) or personal experience)

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Student Materials

To enhance and facilitate your learning experience, the following materials are provided as part of the course package:

- Student Manual:
  - Contains the topical outlines and exercises.
  - Used to follow presentations, take notes, and work through exercises
- Logix5000 Systems Glossary:
  - Contains terms and definitions specific to Logix5000 systems
  - Defines key Logix5000 systems terminology
- RSLogix 5000 and Logix5000 Procedures Guide:
  - Provides the steps required to complete basic RSLogix 5000 software tasks that are common to all Logix5000 hardware platforms
- ControlLogix Controllers Troubleshooting Guide:
  - Contains a systematic approach to diagnosing and troubleshooting common ControlLogix system problems
- Logix5000 Controllers Programming Documentation Reference Guide:
  - Searchable, electronic resource
  - Contains frequently referenced technical documentation

Hands-On Exercises

Throughout this course, you will have the opportunity to practice the skills you have learned through a variety of hands-on exercises:

- Focus on the skills introduced in each lesson
- Integrated practices combine and practice several key skills at once
- Exercises are performed on a ControlLogix workstation:
  - The skills taught in this course can be applied to all Logix5000 platforms
  - You can perform these tasks on the specific platform used in your plant.

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